

**FY 2001 - 2006 PERFORMANCE BASED INCENTIVE****SECTION 1  
General Information**

Title: Accelerate Saltcake Retrieval (U-107 Saltcake Dissolution Proof-Of-Concept)

Project Baseline Summary (PBS): TW03 Work Breakdown Structure (WBS): 5.01.04.02.08

Maximum Available Incentive Fee: Superstretch Fee Potential = \$704K<sup>1</sup>

Type: Superstretch

<sup>1</sup>\$3,522K BCWS + \$704K Fee = \$4,226K Funds**SECTION 2  
Technical Contacts***ORP Point of Contact: J. Swailes/R. Lober**Contractor Point of Contact: D. Allen/A. Youngblood***SECTION 3  
Performance Expectations and Earning Schedule****Basis For Performance Incentive:**

Tank U-107 has been identified as posing the highest long-term risk to the Columbia river of all Single-Shell Tanks (SSTs). This is due to the high content of mobile, long-lived radionuclides mostly in the solid saltcake waste in the tank. To meet current contractual and consent decree commitments this tank is being prepared for interim stabilization starting in April 2001. It is currently scheduled for saltcake retrieval in 2023. This Superstretch Performance Based Incentive (SSPBI) would install a parallel system to dissolve and retrieve a portion of the saltcake as part of interim stabilization, thus significantly reducing the cost for this work due to the potential use of parts of the interim stabilization equipment for saltcake retrieval, reduce the risk to the Columbia river, accelerate cleanup work by performing the first ever removal of saltcake from any SST (currently S-112 is planned for 2004 per the Tri-Party Agreement [TPA]) 3 years early and will reduce the risk associated with the S-112 retrieval.

**General:**

1. The Contractor's final fee will be determined in accordance with clause H.1, Performance Based Incentives and Fee Distribution.
2. Performance Based Incentives may be modified to reflect changes to the project baseline resulting from external drivers, such as, submission and approval of TPA change requests for consistency purposes.
3. Acceptable product completion represents technical adequacy and good value to the government.

**Specific Requirements:**

1. Issue a process control plan by 05/01/01. (Earn 5% of fee)
2. Design, procure, install, and perform an acceptance test on a system to dissolve saltcake in Tank U-107 by 09/30/01. Submit completion letter by 10/30/01. (Earn 25% of fee)
3. Operate the system as specified by the process control plan; monitor results, and transfer at least 100,000 gallons of fluid from U-107 to the Double-Shell Tank (DST) system by 09/30/02. Submit completion letter by 10/31/02. (Earn 40% of fee)
4. Obtain a sample during the operating period and analyze to measure the physical and chemical characteristics of the process fluid by 11/30/02. (Earn 10% of fee)
5. Submit a saltcake dissolution summary letter report on saltcake dissolution proof of concept results on Tank U-107 to the U.S. Department of Energy (DOE) by 12/31/02. The report should identify lessons learned to be utilized in the S-112 design. (Earn 20% of fee)

**SECTION 4**  
**Performance Requirements**

**DEFINE COMPLETION:** *(Specify Performance Elements and describe indicators of success (quality/progress). Include baseline documentation/data against which completion documentation should be compared.)*

The completion dates for Performance Expectations 1 through 4 are target dates. Fee can be earned by completing the performance expectation by the target date. If Performance Expectations 1, 2, 3, or 4 are completed late, the fee associated with the missed performance expectation(s) will be deferred until Performance Expectation 5 is completed. Performance Expectation 5 must be completed by 12/31/02 to support S-112 retrieval demonstration activity (i.e., M-45-03C), in order to earn full available fee. All deferred fee will be paid upon completion of Performance Expectation 5.

1. Contractor shall issue a process control plan by 05/01/01.
2. Contractor will have installed a system to demonstrate the effectiveness of a saltcake removal technology for a SST. The Contractor shall submit a letter (or letters) to DOE to formally document that data which will be acquired during the test to support Items 3 and 4 and that system installation is complete by 10/30/01.
3. Contractor will have operated the saltcake dissolution system as specified by the process control plan to demonstrate the effectiveness of the system. At least 100,000 gallons, as measured by the interim stabilization flow totalizer, shall be transferred to the DST, and a sample of the process fluid will have been obtained for analysis. The contractor will have monitored performance during system operation and will submit a letter to DOE documenting these actions by 10/31/02. Note: The 100,000 gallon requirement is a target volume that may be waived with the concurrence of the DOE.
4. To support future retrieval, transfer designs, and to quantify contaminants of concern moved to safe storage in DSTs, a sample will be obtained during the operating period and analyzed to measure the physical and chemical characteristics (e.g., pH, solids fraction, viscosity, etc.) of the process fluid. A letter report with the laboratory analysis provided will be submitted by 11/30/02.
5. The Contractor shall submit a letter report that summarizes the results of the operations and which documents how readily the waste form dissolves with solution additions by 12/31/02. This document will address the estimated volume of saltcake removed from the tank, the stability of the waste form for long-term storage (e.g., impact of intrusion), as well as summarizing lessons learned to be utilized in the S-112 design and/or deployment from lessons learned, and environmental risk which have been moved to safe storage in DSTs, and recommendations for further application of the selected technology.

**DEFINITIONS:** *(define terms)*

- Operation of saltcake dissolution system: This saltcake dissolution proof-of-concept will involve new equipment and technology. A significant element of the project will be to observe the effectiveness of the technology, measuring the in-tank solubility of the waste form, and to implement equipment or process modifications where required. In addition to adding water to dissolve saltcake, the term "operate" shall include but not be limited to activities such as observation and measurement of results, modifications to equipment to enhance results, preparation of work packages, procedures and other documents that may be required to initiate or continue field activities once the system start up has been completed.

**COMPLETION DOCUMENTS LIST:** *(Name the Documents, Databases, etc., which will be submitted to show completion for each Performance Expectation.)*

1. Process Control Plan
2. Letter documenting completion of equipment installation.
3. Letter documenting the operational activities to demonstrate the effectiveness of the system including an assessment of the physical and chemical characteristics of the waste transferred from the tank.
4. Letter report transmitting the laboratory analysis of the process fluids.
5. Letter report documenting the results of the saltcake dissolution.

**ASSUMPTIONS/TECHNICAL BOUNDARY CONDITIONS:** *(For reasonably foreseeable impacts to performance that are not within control of Contractor. If the assumption or condition proves false, the remedy is renegotiations unless stated otherwise.)*

1. Existing leak detection systems and methodology will be adequate for this saltcake retrieval activity. Delays resulting from the incorporation of additional systems/methodology will result in a day for day slip in the performance milestones.
2. The current Management Self-Assessment protocols currently used by the Interim Stabilization Project are adequate for the operation of this equipment. Delays caused by the imposition of any additional assessments or reviews prior to the system startup and operations will result in a day-for-day slip in the performance milestones.
3. If Tank U-107 is proven to be an unacceptable tank, CHG will submit another tank to perform this proof of concept test.
4. The transfer line used to pump Tank U-107 is unplugged and returned to service no later than 05/31/02.
5. The designated receiver DST has adequate space available to receive the U-107 waste.
6. The total supernate inventory is transferred within 14 days of the resumption of saltwell pumping of U-107, based on a net waste transfer flow rate of 2 gpm and 50% operating efficiency. If the supernate inventory cannot be removed within 14 days of pumping, a day-for-day slip in performance milestones will result.

If these assumptions prove to be inaccurate, then the completion dates in this SSPBI will be renegotiated.

**SECTION 5**  
**Signatures**

\_\_\_\_\_  
ORP Manager/Date

\_\_\_\_\_  
CHG President and General Manager/Date

\_\_\_\_\_  
ORP Contracting Officer/Date

\_\_\_\_\_  
CHG Contract Representative/Date